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UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

SOUTHERN DIVISION

ENTROPIC COMMUNICATIONS, LLC,

Plaintiff,

v.

DISH NETWORK CORPORATION, *et al.*,

Defendants.

Case No.: 2:23-cv-01043-JWH-KES

NOTICE OF LODGING OF PLAINTIFF'S SLIDES PRESENTED AT THE AUGUST 9, 2023 HEARING ON DEFENDANTS' MOTION TO DISMISS

Plaintiff Entropic Communications, LLC hereby gives notice that it is lodging a copy of the slides that it presented during the August 9, 2023 hearing on Defendants Dish Network Corporation; Dish Network LLC; Dish Network Service, LLC, and Dish Network California Service Corporation's motion to dismiss, which are attached hereto as Exhibit A.

Dated: August 9, 2023

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EXHIBIT A

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Entropic Comm'ns, LLC v. DISH Network Corp., 2:23-cv-01043-JWH-KES (C.D. Cal.)

Physical Network – Prior Art

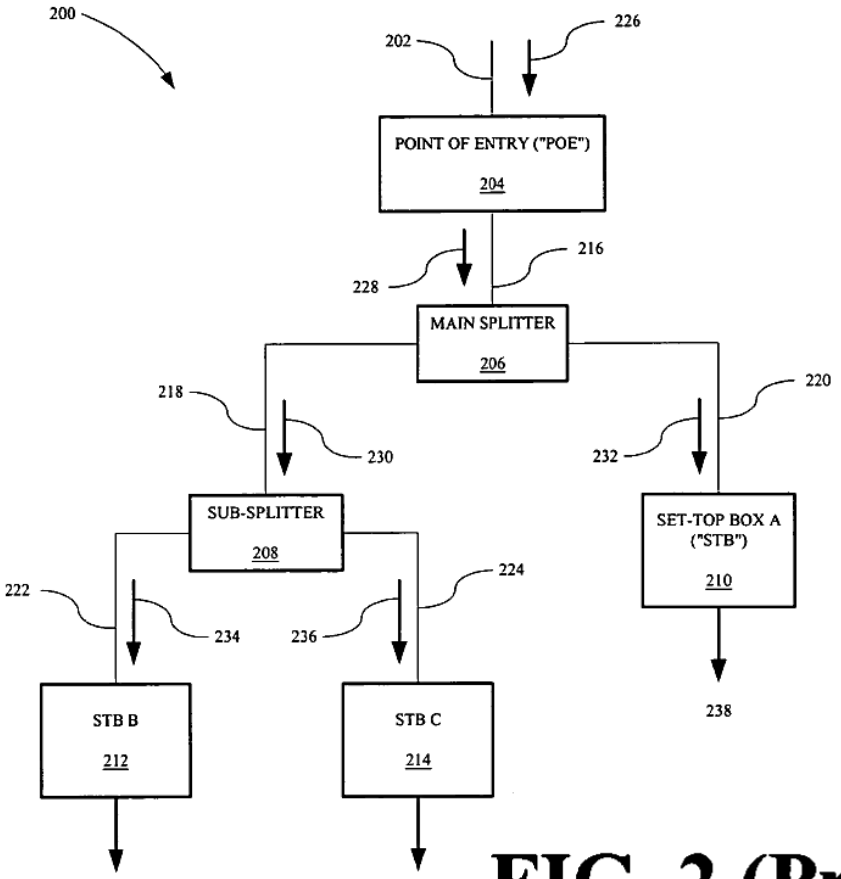
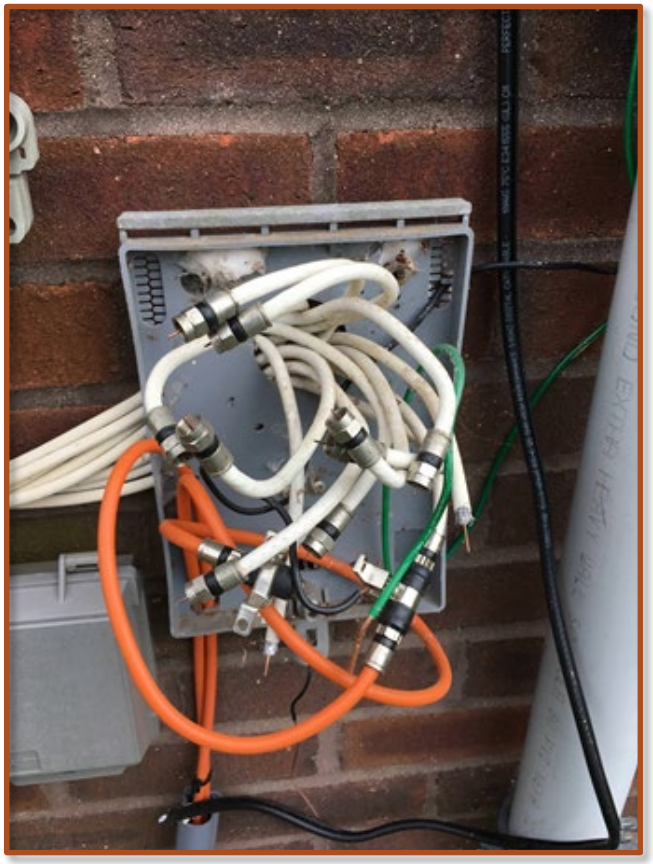


FIG. 2 (Prior Art)

Prior Art Physical Network

Example of existing physical network (CCN)



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MoCA – Breakthrough technological innovation according to Defendants

57. In or about April 2009, Steve Necessary, in his capacity as vice president of video strategy and product management for "Cox Communications" stated that "MoCA is an important enabling technology for our connected home entertainment strategy. With it, we can offer our subscribers new ways to enjoy Cox's video services including multi-room DVR and other connected entertainment services."

59. In or about April 2009, Mr. Necessary in his capacity as vice president of video strategy and product management for "Cox Communications," also stated that Cox Communications was "pleased to leverage [Entropic Inc.'s] MoCA solutions as part of our connected entertainment strategy"[7]

61. In or about September 2010, Vince Groff, in his capacity as executive director of "Cox Communications" stated, "We believe MoCA will continue to be the primary network connection path between televisions in the home," and "We are looking forward to commercial availability of MoCA 2.0."[8]

- Entropic's Compl. against Cox ¶ 57, 59, 61 (DE 1)

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MoCA – Breakthrough technological innovation according to Defendants

48. In or about January 2012, Michael Hawkey, vice president of sales and Marketing for EchoStar Corporation announced at the Consumer Electronics Show (CES) that it "chose the MoCA technology" for use in DISH's Hopper and Joey products "to allow the best bandwidth and use of quality of service that we could get a connected system solution."[3]

- Entropic's Compl. against DISH ¶ 48 (DE 1)

135. In October 2010, Chris Albano, in his capacity as Comcast's senior director/CPE and home networking stated, "The whole world is moving to MoCA. We at Comcast have made the decision that all new products will have MoCA embedded into them."[10]

- Entropic's FAC against Comcast ¶ 135 (DE 69-1)

MoCA – Innovation using existing physical network (CCN)

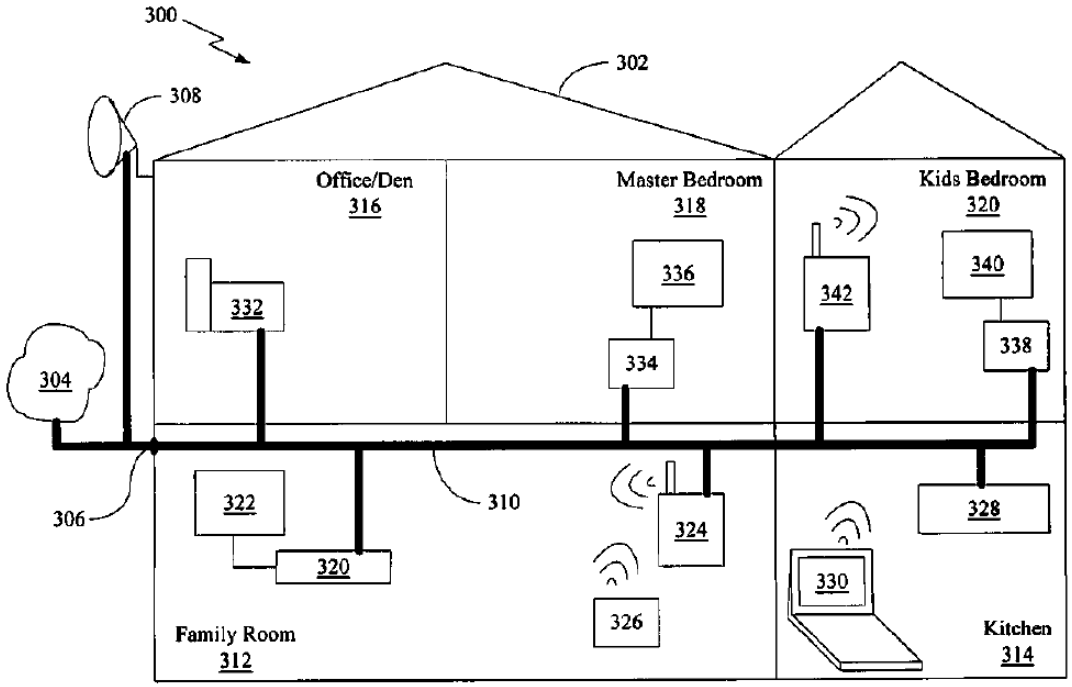

FIG. 3

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MoCA – Innovation using existing physical network (CCN)

- Creating a peer-to-peer logical network over a physical network (CCN) through network node probing and admission (BCN) is a patent-eligible improvement of that medium. *See, e.g., Maxell, Ltd. v. Fandango Media, LLC,* No. 17-cv-07534, 2018 WL 5085141, at *6 (C.D. Cal. Mar. 21, 2018).
- Numerous cases have concluded that this type of transformation of an existing infrastructure is patent-eligible.

Case	Holding
Uniloc USA, Inc. v. LG Electronics USA, Inc., 957 F.3d 1303, 1308 (Fed. Cir. 2020)	Finding that the improvement was patent-eligible where "the claimed invention change[d] the normal operation of the communication system itself to 'overcome a problem specifically arising in the realm of computer networks.'"
Marble Voip Partners LLC v. Zoom Video Communications, Inc., 2023 WL 3055323, at *8 (D. Kan. Apr. 24, 2023)	Finding allegations sufficient to satisfy step one of *Alice* inquiry where "the FAC alleges that the '129 Patent claims are directed to what Marble asserts is a novel computer architecture that is designed to solve problems particular to SIP-based VoIP networks."

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’566 Patent

Prior Art - Development of multi-device network

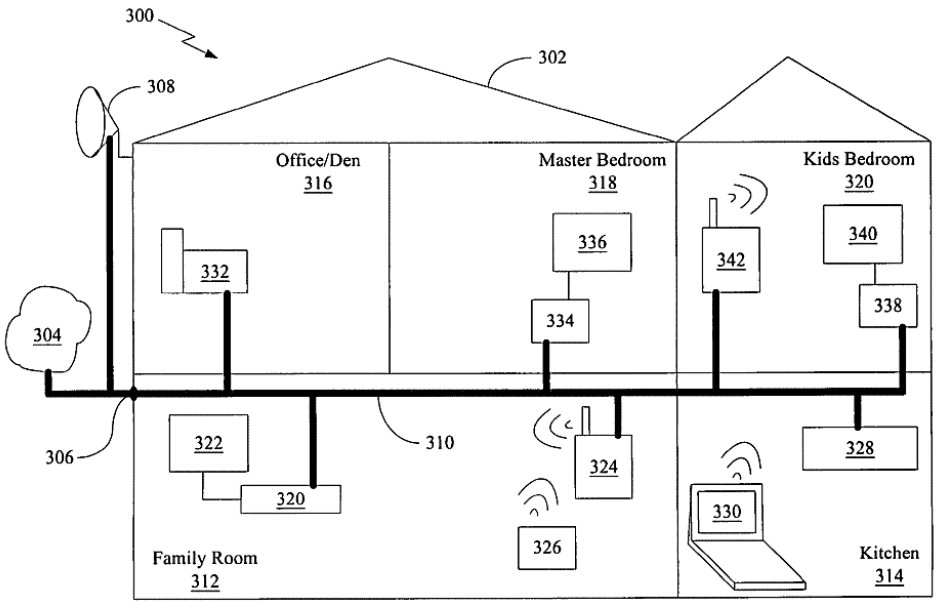

FIG. 3

In recent years, numerous consumer electronics appliances and software applications have been developed and continue to be developed that are able to receive, store, process and transmit programming information to multiple devices in the home at the time and manner as determined by the viewer. The main drawback to the ability of users to view multimedia information stored on multiple storage devices at the home and view it (or listen to it) on any capable home appliance at the time and manner of his choosing is the lack of a viable home networking solution.

'566 Patent at 3:1-10

Physical Network – Prior Art

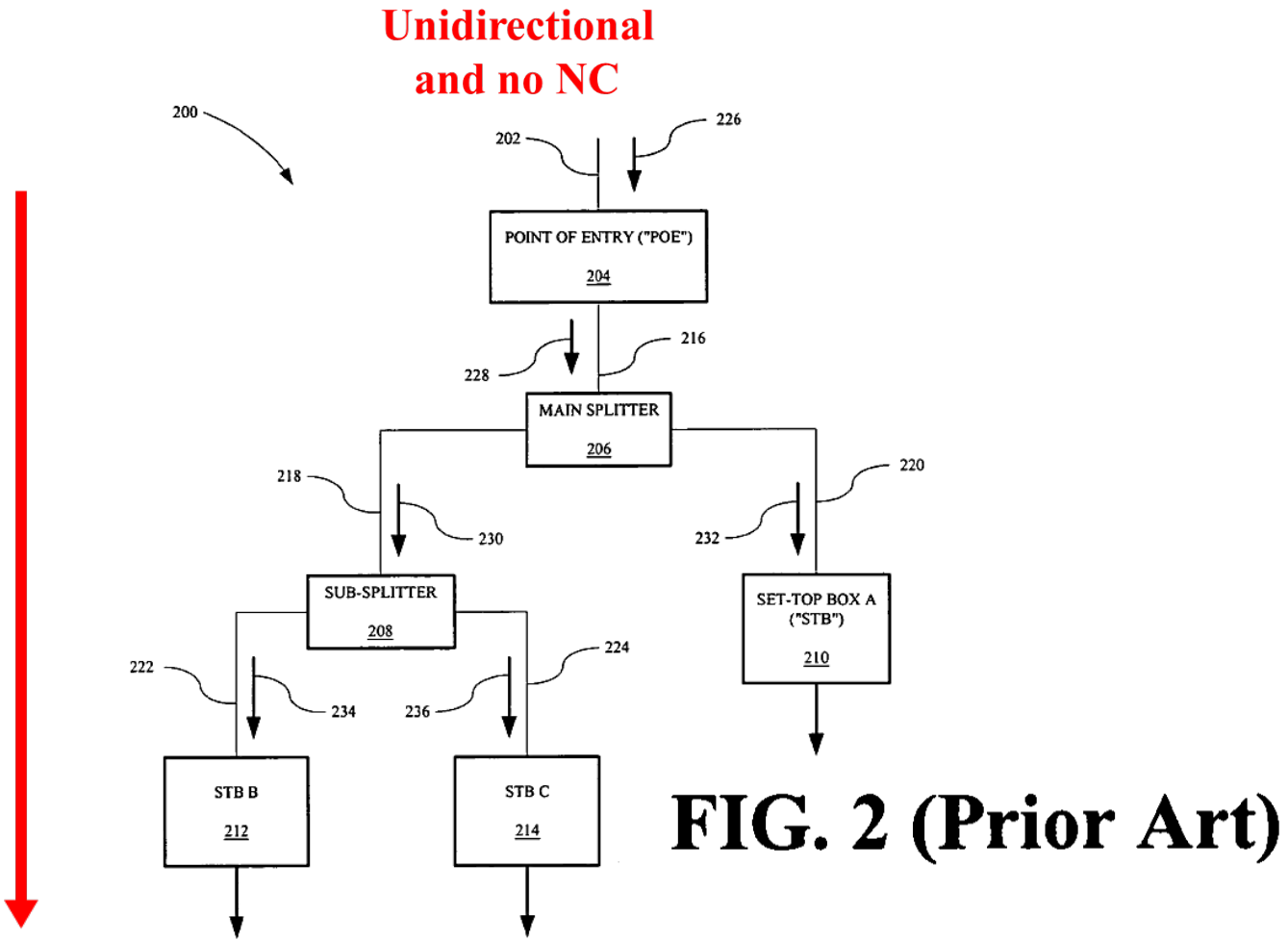

FIG. 2 (Prior Art)

Prior Art Physical Network

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Logical Network (BCN) – Lives at MoCA Layer – Integrates NC and Two-Way Traffic

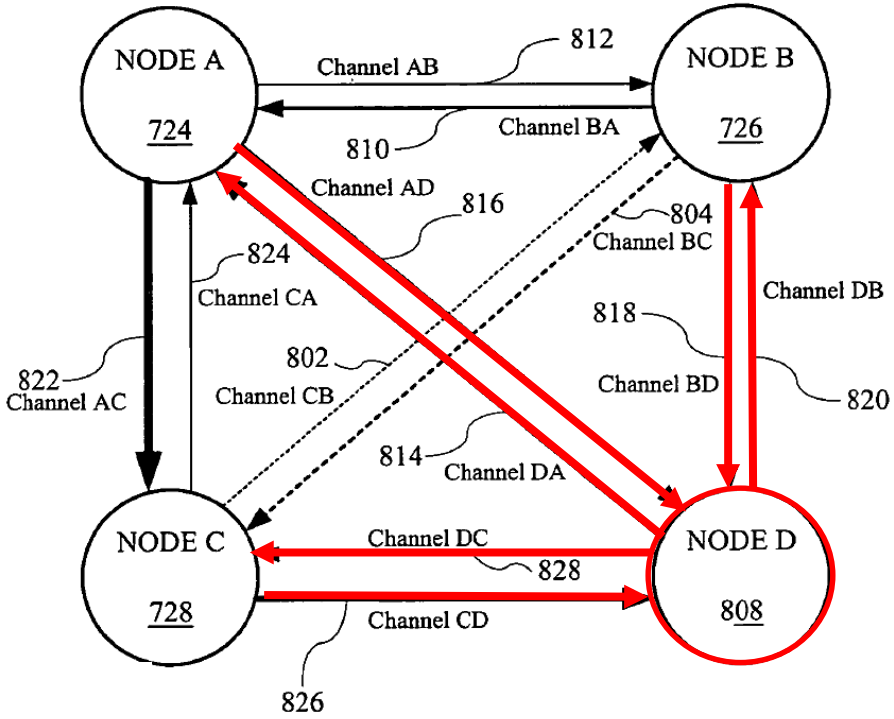

Figure 8
Logical Network
(Node D is NC)

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’566 Patent Claim 1

1. A communication circuit comprising:
a transceiver operable to communicate in a coaxial cable network (CCN);
a controller that is operable to, at least:
transmit first information on the CCN, the first information comprising information indicating when admission messages for requesting admission to the CCN may be transmitted on the CCN;
receive an admission request message from a new node for admission to the CCN;
if the received admission request message is correctly received and the new node is authorized to join the CCN, then perform an admission procedure with the new node;
probe a communication link of the CCN connecting the communication circuit to the new node; and
adapt transmission parameters for the communication link based, at least in part, on the probe.

’566 Patent at 25:46-63

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Claim Construction
1 of 3 Terms

Limitation	Proposed Construction
if the received admission request message is correctly received and the new node is authorized to join the CCN, ***perform an admission procedure*** with the new node	"Establishing a logical communication link between the ***controller node*** and the new node over existing CCN physical connections."

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Claim Construction
2 of 3 Terms

Limitation	Proposed Construction
probe a communication link of the CCN connecting the communication circuit to the new node	"Evaluating characteristics of the signal pathway from ***controller node*** to the newly admitted node, using one or more probes."

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Claim Construction
3 of 3 Terms

Limitation	Proposed Construction
adapt transmission parameters for the communications link based, at least in part, on the probe.	"Selecting transmission parameters for the signal pathway from ***controller node*** to the newly admitted node, based in part on the evaluation of the prior probing step."

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Entropic's claim construction is plausible, and thus acceptable at the pleading stage

- Claim language itself disposes of the motion in Entropic's favor, but if claim construction is needed, Entropic's constructions are based on the intrinsic record.
- This was one of the early MoCA patents, which had a robust prosecution history over 14 years with 13 office actions and 3 parents.
- Claims are tied to admission procedure and communications with Network Coordinator over CCN.
- Claim refers to the Network Coordinator and the specification describes what that is.
  - The first BCN modem that enters the network is (usually) designated as the controller. '566 Patent at 7:34-43.

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Entropic's claim construction is plausible, and thus acceptable at the pleading stage

- In the initial patent application of the parent of '566, Claim 1 specific, *inter alia*, "[a] Broadband Coaxial Cable Network ('BCN' comprising, a first BCN modem in signal communication with a coaxial cable network." U.S. Appl. Ser. No. 11/231,349 [Ex. D. to Suppl. Br.]
  - As a result, BCN is clearly the logical network that is still implied by the prosecution history.
- Unlike in the prior art, the patented Network Coordinator provides the necessary information, allowing other BCN modems to "adapt to the network characteristics, synchronize to the network timing and framing, make transmission requests and be able to communicate with some or all of the other BCN modems in the network." U.S. Patent Appl. Ser. No. 11/231,349, Amendment (March 20, 2012) at 8-9.

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Entropic's claim construction is plausible

- Contrary to DISH's argument, Entropic does not concede that Claim 1 is representative of ***all*** aspects of the other asserted claims.
  - For example, Claim 2.

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’910 Patent

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'910 Patent Claim 3

3. A system for transmitting digital data over a network comprising:

a transceiver adapted to receive a plurality of packet data units; and

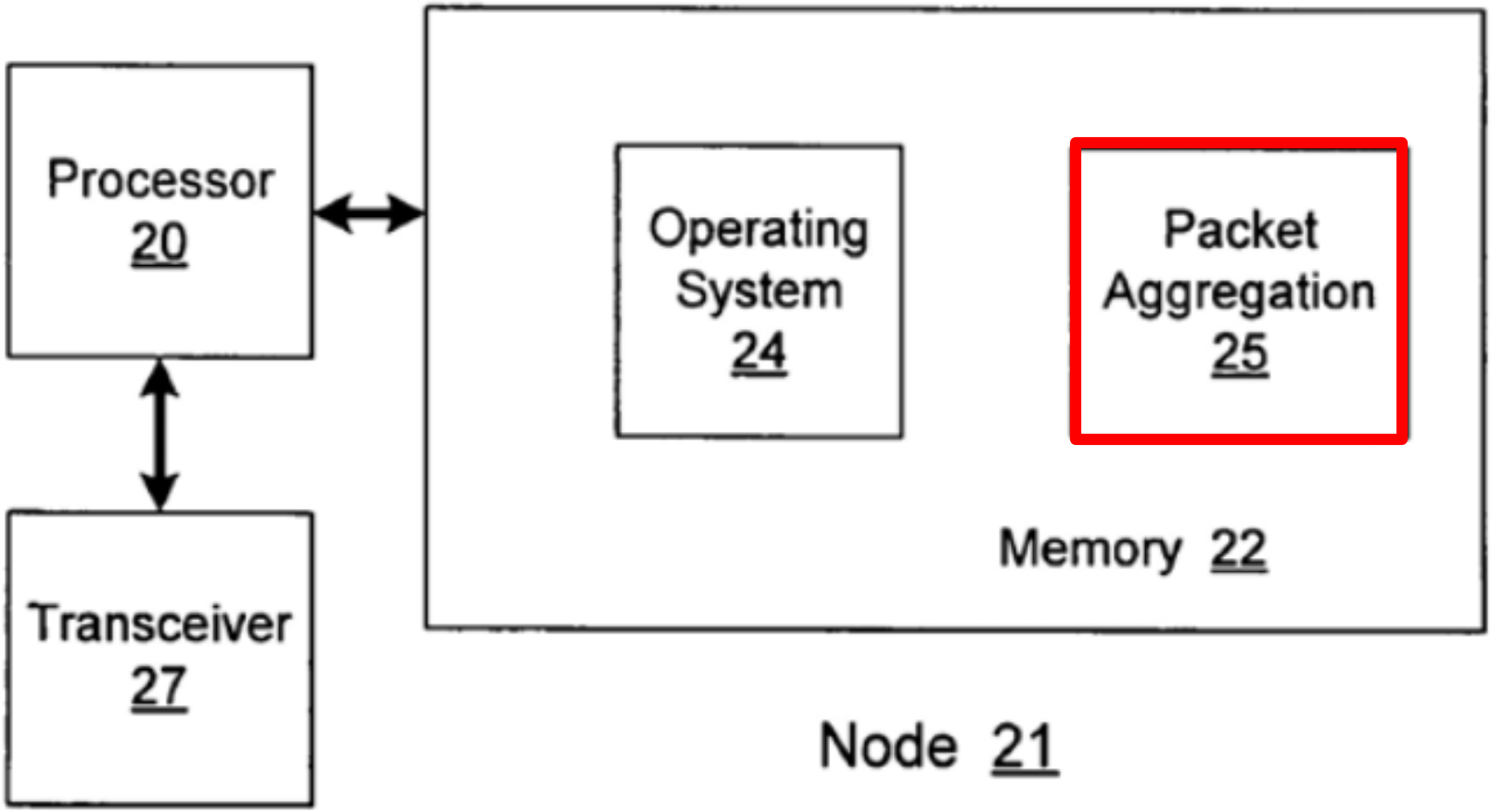
a packet aggregation module for identifying at least two of the plurality of packet data units that have a same destination node and for forming an aggregate packet from the at least two of the plurality of packet data units;

wherein the transceiver is adapted to transmit the aggregate packet to at least one destination node; and

wherein the packet aggregation module identifies the same destination node by identifying a same aggregation identifier.

'566 Patent at 8:4-16

Patented aggregation module



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Claim Construction
1 of 2 Terms

Limitation	Proposed Construction
packet aggregation module for identifying at least two of the plurality of packed data units that have a same destination node	"A module that forms aggregate packets from individual packet data units based upon those individual packet data units having the final destination, indicated by having the same aggregation identifier."

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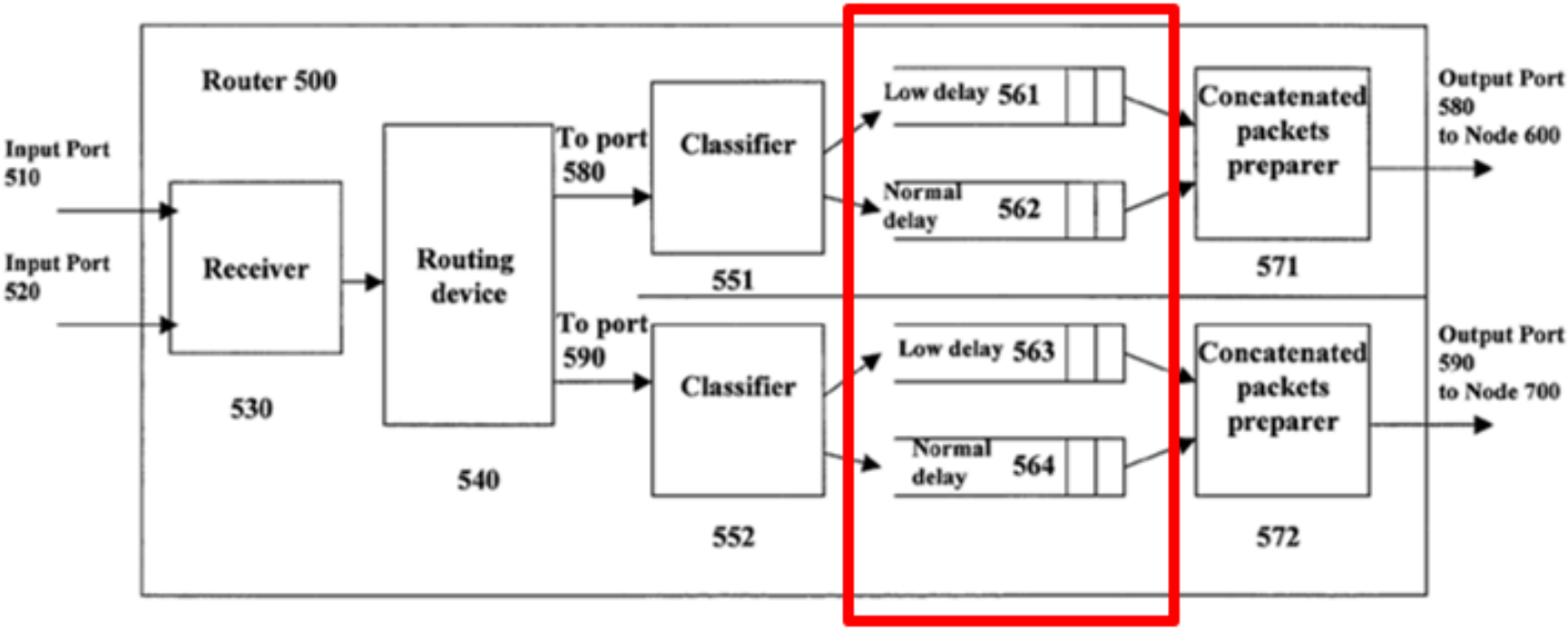
Claim Construction
2 of 2 Terms

Limitation	Proposed Construction
and ***forming an aggregate packet*** from at least two of the plurality of packet data units;	"Combining a plurality of packet data units having the same aggregation identifier identifying the same final destination node, wherein the aggregated packet comprises ***a single header***, and ***an aggregated payload*** that is formed from the plurality of packet data units."

Prior art packet concatenation ’893 Rajan



Prior art concatenated packets based on, *e.g.*, delay, rather than by common destination. *See* U.S. Patent No. 7,170,893, Fig. 5.

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Prior art packet concatenation (’893 Rajan)

- “The destination addresses of packets 1_i-1_k are extracted from respective headers and then are stored, for example, in a memory . . .” 7,170,893 Patent 2:56-48 (Rajan).
- “In this example, content information parts 42-44 contains respective stored (original) destination addresses of packet 1_i-1_k .” 7,170,893 Patent 3:16-18 (Rajan).
- Operates at layer 3 (on IPv4 Packets).

Ethernet PDUs without aggregation

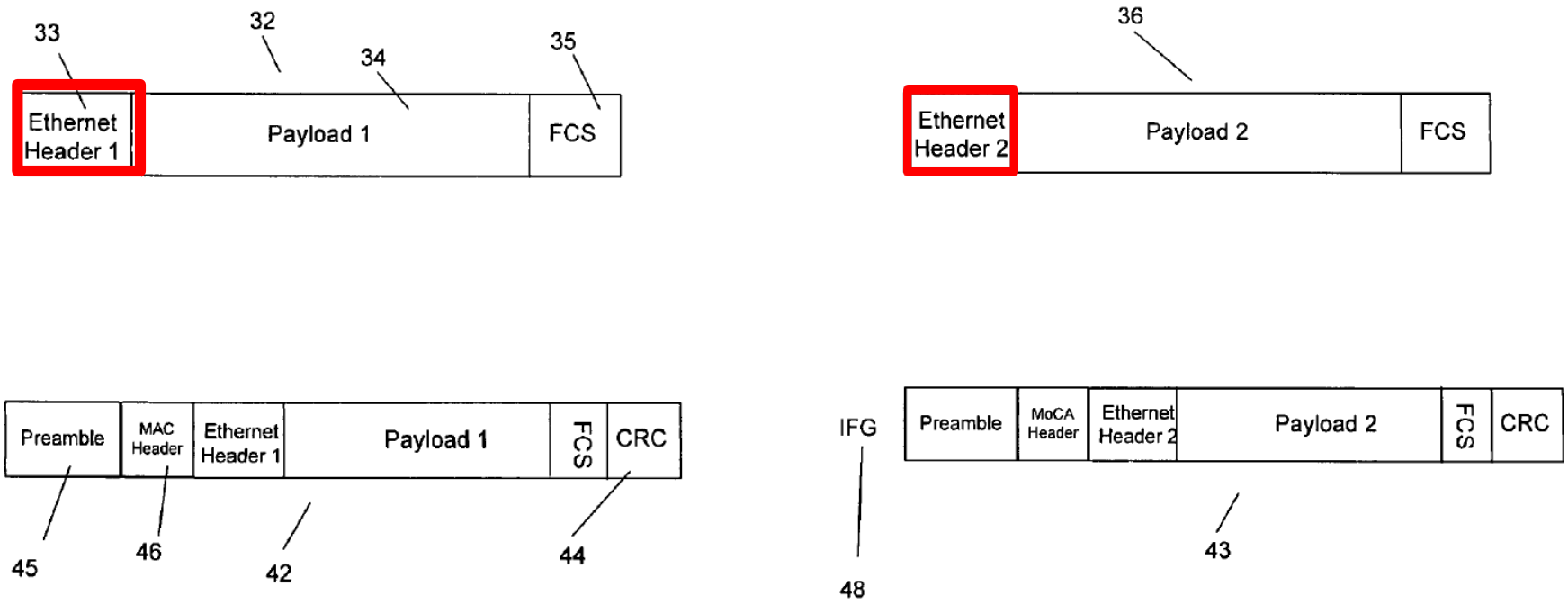

Fig. 3

Ethernet cannot aggregate based on common destination in MoCA.

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Prosecution History

NOTICE OF ALLOWANCE AND FEE(S) DUE

With regard to claim 56, the prior art of record fails to anticipate or make obvious a system comprising "... a packet aggregation module for identifying at least two of the plurality of packet data units that have a same destination node and for forming an aggregate packet from at least two of the plurality of packet data units; ... wherein the packet aggregation module identifies the same destination node by identifying a same aggregation identifier."

DE 71-6 at 2; 7

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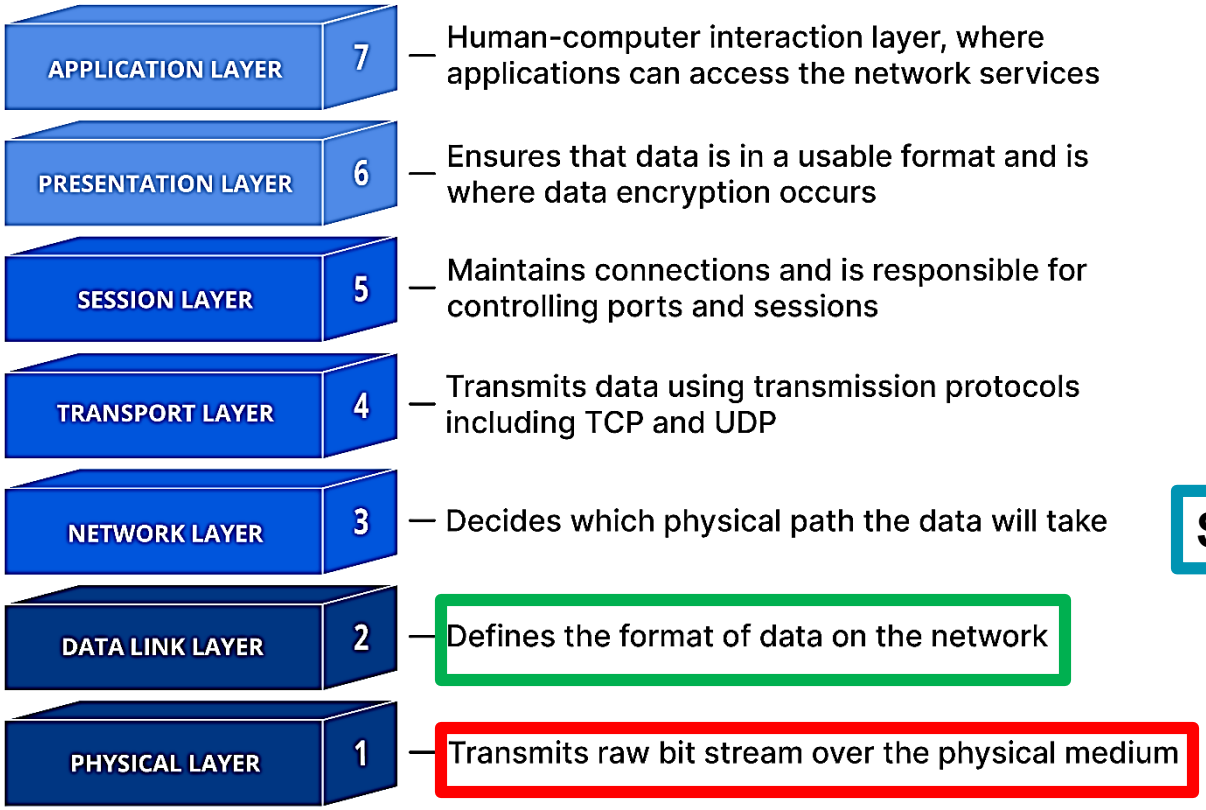
PAM in MoCA layer



Source of Ethernet PDUs

Location of PAM

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Innovation - Packet aggregation based on common destination, rather than, *e.g.*, delay/priority

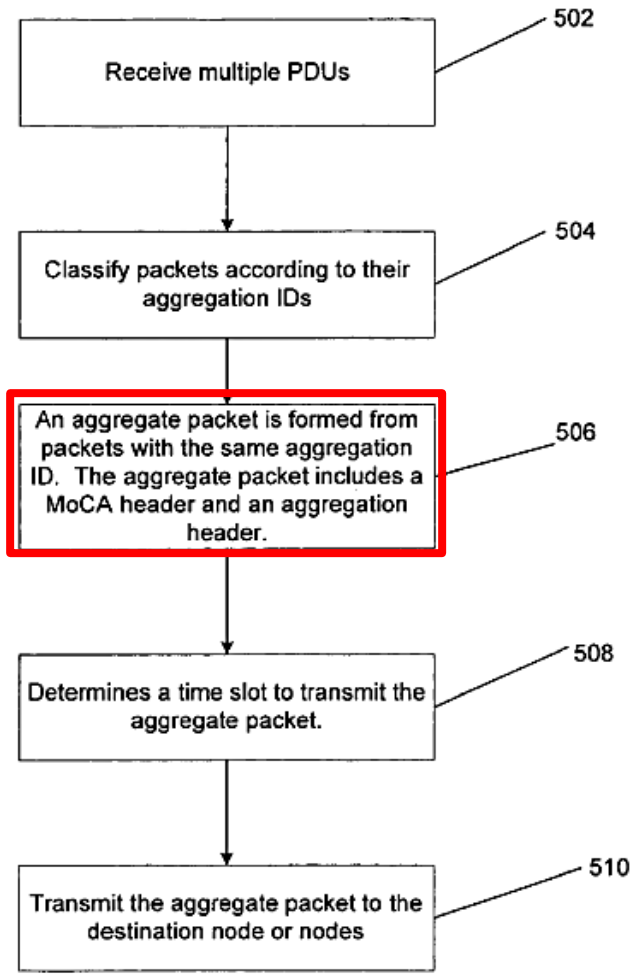

Fig. 5

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Problem with prior art

In some networks, such as an MoCA network or an Ethernet-based network, digital data is transmitted in the form of a packet. However, overhead information is associated with each packet transmitted through the network. The overhead information, including identifiers, source and destination addresses, error control fields, etc., is added to the user data and reduces the availability of network bandwidth for user data.

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Innovation patented aggregated packet based on common destination node

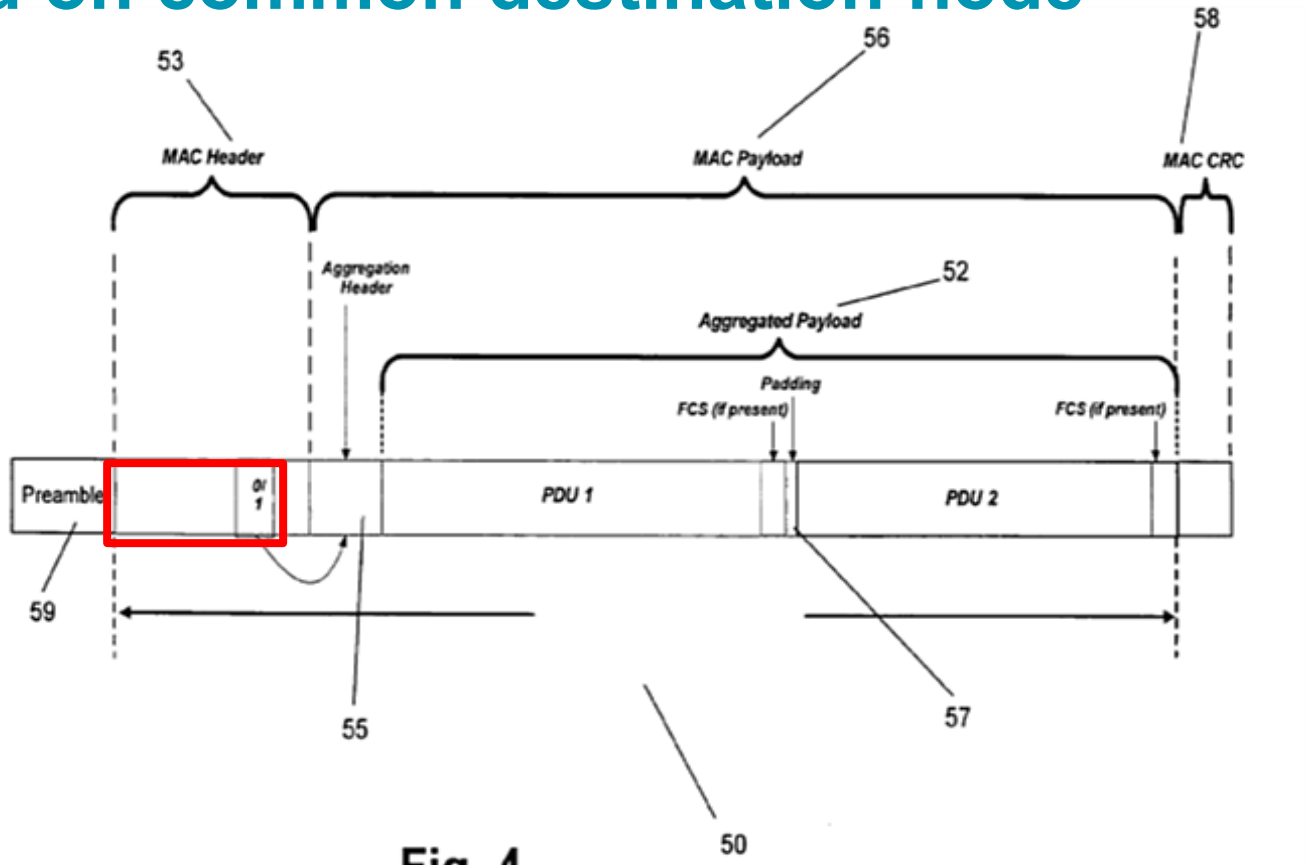

Fig. 4

The invention reduces the bandwidth required for packet overhead by eliminating overhead information that otherwise would be required for each separate PDU. *See, e.g.,* '910 Patent at 2:1-3; 6:25-27.

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Innovation patented aggregated packet based on common destination node

- This is important because it opens up bandwidth.

- The data structure yields important technological consequences and, thus, is not an abstract idea. *ADASA Inc. v. Avery Dennison Corp.*, 55 F.4th 900, 908-09 (Fed. Cir. 2022).

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Claim 1 ≠ Claim 3

1. A method of transmitting digital data over a network comprising:

receiving a plurality of packet data units;

identifying at least two of the plurality of packet data units that have a same aggregation identifier;

forming an aggregate packet from the at least two of the plurality of packet data units; and

transmitting the aggregate packet to at least one destination node;

wherein the aggregate packet comprises an aggregation header that comprises a number of packet data units in the aggregate packet,

further comprising:

determining the presence of a checksum bit in a media access control header;

calculating a first checksum for the aggregation header;

comparing the first checksum to a second checksum that is received in the aggregation header of the aggregate packet;

receiving the aggregate packet, wherein the aggregate packet comprises the media access control header;

determining the presence of an original frame check sequence bit in the media access control header; and

passing the at least two of the plurality of packet data units to a device without modifying frame check sequences if the second checksum is found to be correct.

3. A system for transmitting digital data over a network comprising:

a transceiver adapted to receive a plurality of packet data units; and

a packet aggregation module for identifying at least two of the plurality of packet data units that have a same destination node and for forming an aggregate packet from the at least two of the plurality of packet data units;

wherein the transceiver is adapted to transmit the aggregate packet to at least one destination node; and

wherein the packet aggregation module identifies the same destination node by identifying a same aggregation identifier.